

REMARKS

After entry of this Amendment, claims 55–65 and 84 will be pending. Claims 1–54 and 66–83 have been withdrawn from consideration and are hereby cancelled. Claim 55 has been amended and new claim 84 has been added. Support for the amendment and new claim may be found, for example, in the original claims, as well as in the Specification, e.g., at page 16, line 15 – page 17, line 8 and page 23, lines 15–25. No new matter has been added.

Claim Objections

The Examiner objected to the use of the term “selecting” a thickness of the regrowth layer. Applicants have amended claim 55 accordingly.

Rejection of Claims Under 35 U.S.C. §102

Claims 55, 56, 62, and 65 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2003/0089901 to Fitzgerald (“Fitzgerald”). Fitzgerald appears to disclose forming a SiGe alloy layer, planarizing the layer to remove roughness, and growing a regrowth layer over the planarized surface. See Figures 5A–5D and 6A–6D and related text. Preferably, in contrast to the instant claims, the regrowth layer is lattice-matched. A primary concern of Fitzgerald is apparently to maintain a planar surface for state-of the-art lithography. See Abstract and paragraphs [0035]–[0036].

Fitzgerald is silent about dislocation densities in devices formed on his layer structure. The reference does not teach or suggest selecting a placement of misfit dislocations such that a device formed over the second layer is substantially free of misfit dislocations, as recited in amended independent claim 55. Certainly Fitzgerald does not teach placing misfit dislocations in accordance with the specific technique claimed, namely, by forming a regrowth layer, wherein the regrowth layer has a thickness defining a distance between a top surface of a second layer and the misfit dislocations corresponding to the selected placement of the misfit dislocations.

Applicants submit that amended independent claim 55 and claims dependent therefrom are patentable over the cited art for at least this reason.

Rejection of Claims Under 35 U.S.C. §103

Dependent claims 57, 58, 59, 60, 61, 63, and 64 are rejected under 35 U.S.C. § 103(a) as being obvious in view of Fitzgerald.

Applicants submit that these dependent claims are patentable for at least the reasons amended independent claim 55 from which they depend is patentable.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that all claims are now in condition for allowance.

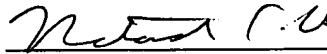
Applicants believe that no fees are necessitated by the present Response. However, in the event that any fees are due, the Commissioner is hereby authorized to charge any such fees to Deposit Account No. 07-1700.

If the Examiner believes that a telephone conversation with Applicants' attorney would expedite allowance of this application, the Examiner is cordially invited to call the undersigned attorney at (617) 570-1806.

Respectfully submitted,

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